1. INTRODUCTION AND BACKGROUND

1.1. PROJECT BACKGROUND

A Regional Conservation Partnership Program (RCCP) grant was awarded to the Grand Valley Metropolitan Council (GVMC) in 2017 to improve aquatic habitat in the Lower Grand River (Portland [confluence of the Looking Glass River] to Grand Haven, Michigan [mouth of the river]), where it flows through downtown Grand Rapids, Kent County, Michigan (GVMC, 2011). The RCPP grant provides $8 million in funding for the "Lower Grand River Habitat Restoration and Farmland Conservation Project." Of that amount, about $4.1 million was allocated to support instream habitat restoration of the Grand River in Grand Rapids, Michigan. Specifically, the $4.1 million would be used for revitalizing the rapids in Grand Rapids between I-196 and Fulton Street bridges (the Project) under the U.S. Department of Agriculture (USDA) Natural Resource Conservation Service (NRCS) Watershed Protection and Flood Prevention Act, PL 83-566 program and would include the following activities:

- Removal of four low-head beautification dams;
- Restructuring the channel through excavation, grading, and importing boulders, cobble and gravel substrate;
- Installing additional scour protection on existing bridge structures;
- Installing five recreational features; and
- Installing and improving shoreline access to the river.

The PL 83-566-funded in-stream habitat restoration in the Grand River would revitalize an approximately 0.7-mile stretch of the river flowing through the City of Grand Rapids by restoring aquatic connectivity and improving habitat for fish and aquatic life, including Michigan threatened and endangered species and the federally-listed endangered mussel *Epioblasma triquetra* (Snuffbox). The estimated cost of the proposed Project construction is approximately $11 million.

As a result of the grant being awarded to RCPP, the NRCS has determined that a Watershed Project Plan-Environmental Assessment (WPP-EA) is necessary to identify and address potential environmental impacts resulting from the proposed Project in accordance with environmental law. The National Environmental Policy Act (NEPA) of 1969 requires Federal agency officials to consider the environmental consequences of their Proposed Actions before a decision is made. This WPP-EA has been prepared to comply with the requirements of NEPA and the National Watershed Program Manual. This WPP-EA presents the Project and associated alternatives, and discusses potential environmental impacts that may result from the implementation of the Project.

The NRCS would issue a Finding of No Significant Impact (FONSI) or request additional information as necessary to approve the Proposed Action.

1.2. PROJECT LOCATION AND DESCRIPTION

The Project is within the wetted channel of the Grand River between the I-196 and Fulton Street bridges in Grand Rapids, Kent County, Michigan. In addition, the Project would include staging areas and access

areas on the banks of the Grand River between I-96 and Fulton Street and would include three recipient sites in the Grand River for the placement of unionid mussels collected within the isolation features during construction. The three recipient sites are as follows:

- Mussel bed near Ada, Michigan,
- Mussel bed at Riverside Park just upstream of Grand Rapids, and
- Mussel bed upstream of the I-196 south bridge.

The Ada recipient site is along the left (southwest) bank approximately 0.6 miles downstream of the Thornapple River near Ada, Kent County, Michigan. The Riverside Park recipient site is along the left (east) bank, approximately 1.1 miles upstream of Ann Street in Grand Rapids. The I-196 south bridge recipient site is along the right (north) bank, approximately 31 miles upstream of the I-196 south bridge, south of Grand Rapids.

Only one percent of river habitat in the lower peninsula of Michigan is rapid-type habitat, although this type is important to the life cycle of many aquatic species. Rapid-type habitat is defined as a river area with a steep energy gradient, coarse bed substrates, and non-uniform distribution of instream velocities. The historic rapids of the Grand River that ran through the City of Grand Rapids (City) were socially and culturally important for Native Americans and were the namesake for the City. The ecosystem processes and recreational functions of the former rapids have been degraded by channelization, dredging, and urban development.

As part of that historical development process, five dams have been constructed within the City including the 6th Street Dam and four smaller beautification dams. These dams are not regulated by Part 315 or 307 of Michigan's Natural Resources and Environmental Protection Act due to their height and retention areas behind the dams. The 6th Street Dam (occasionally called the 4th Street Dam) was constructed over 150 years ago to provide water power and to facilitate the floating of logs from upstream over the bedrock outcrop located upstream of Leonard Street. The last known maintenance on this dam was in 1929. Substantial scour holes in and around the structure have increased the likelihood that the structure will fail, and the structure will likely need to be maintained or replaced soon (Vos, 2015). Shortly after construction of the 6th Street Dam, four low-head beautification dams were constructed downstream of the 6th Street Dam to maintain channel width during low flow periods to prevent concentration of the raw sewage that was discharged into the river in that era. Dredging and mining of large substrate has occurred in the channel downstream of the 6th Street Dam. In addition, the river is constrained between floodwalls that extend for over a mile on both sides of the channel. These modifications have together created a straight, uniform channel with little diversity in flow depth, substrate, or velocity, thus limiting natural aquatic ecosystem processes.

The City, in close collaboration with its Project partner, Grand Rapids Whitewater (GRWW), proposes revitalizing the Grand River within the City between I-196 and Fulton Street in Kent County, Michigan (Project; Figure XXX). The purpose of this Project is, to the greatest extent reasonably possible, revitalize, enhance, and maintain the rapids in the Grand River in downtown Grand Rapids from I-196 to Fulton Street. The revitalization, enhancement, and maintenance of the rapids is expected to facilitate incidental benefits such as expanded public access and use of the river, expanded recreational use of the river, improved aquatic habitat diversity, and improved public health and safety. This Project would

simultaneously address the objectives of multiple regional planning documents, including the Lower Grand River Watershed Management Plan (Lower Grand River Organization of Watersheds 2011), the Grand River Assessment (Hanshue and Harrington 2017), and the Lake Sturgeon Rehabilitation Strategy (Hayes and Caroffino 2012).

The proposed Project is within the most urbanized reach of the Grand River where rapids historically existed within the city of Grand Rapids, Michigan. Between Lake Michigan and Ada, Michigan, a distance of approximately 60 river miles, river gradient sufficient to restore rapid habitat only exists between Ann Street and Fulton Street. The area between I-196 and Fulton Street is currently a homogeneous river channel. Creating riffles, runs, glides, drops, and pools should enhance habitat for aquatic species and provide improved recreational opportunities.